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BEFORE THE ARIZONA CORPORATION COMMISSION

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COMMISSIONER

Arizona Corporation Commission
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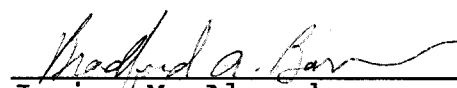
IN THE MATTER OF THE COMPETITION
IN THE PROVISION OF ELECTRIC
SERVICES THROUGHOUT THE STATE OF
ARIZONA.

DOCKET NO. U-0000-94-165

NOTICE OF FILING

Staff hereby files its summary of the Energy Efficiency
and Environment Task Force Meeting (Working Group on Retail
Electric Competition) held on May 19, 1995 in the above-captioned
docket.

RESPECTFULLY SUBMITTED THIS 29th DAY OF JUNE, 1995.


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1 DIXIE ESCALANTE RURAL ELECTRIC ASSOCIATION
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SUMMARY OF

THE ENERGY EFFICIENCY AND ENVIRONMENT TASK FORCE MEETING

(Working Group on Retail Electric Competition)

May 19, 1995

Docket No. U-0000-94-165

**Utilities Division
Arizona Corporation Commission
1200 West Washington
Phoenix, Arizona 85007**

DRAFT

**SUMMARY OF THE
ENERGY EFFICIENCY & ENVIRONMENT TASK FORCE MEETING
MAY 19, 1995
WORKING GROUP ON RETAIL ELECTRIC COMPETITION**

The Energy Efficiency and Environment Task Force held its second meeting on May 19, 1995. The Task Force meeting opened with a presentation by Dr. Eric Hirst from Oak Ridge National Laboratory. His two-part presentation included talks entitled "Electric Utility DSM Programs and Competition" and "The Future of Electric Resource Planning." In attendance were Commissioners Renz D. Jennings and Carl J. Kunasek, Corporation Commission Staff members, members of the Task Force, staff members of the Arizona Legislature, and the general public. The meeting consisted of a brainstorming session which identified questions related to Integrated Resource Planning and environmental consequences of possible electric industry restructuring.

THE ROLE OF INTEGRATED RESOURCE PLANNING

Over the last five to eight years, Integrated Resource Planning (IRP) for electric utilities has been adopted in over 30 states, including Arizona. Arizona utilities have completed two cycles of IRP and are preparing to commence the third IRP cycle.

With emergence of interest in retail electric competition, the nature and appropriateness of IRP in a restructured, more competitive electric industry are uncertain.¹ The Task Force first identified the reasons why Arizona utilities currently conduct IRP and then listed the IRP-related issues that should be considered as various options for a restructured industry are evaluated:

WHY DO WE DO IRP? WHAT ARE THE GOALS OF IRP?

- Goal of Service at Long-Run, Least Societal Cost:
 - ◆ IRP seeks to minimize the costs of providing electric energy services.

¹ See, for example: Eric Hirst, Bruce Tonn, and Douglas Bauer, "The Future of IRP and Other Public Goods in a Market-Driven World," Electricity Journal, April, 1995: 74-84. Eric Hirst, "Electric-Utility DSM Programs in a Competitive Market," Oak Ridge National Laboratory, ORNL/CON-384, 1994. James Newcomb, "Energy Efficiency Services: What Role in a Competitive Environment?" Electricity Journal, November, 1994: 24-45.

- ◆ IRP helps to ensure that utilities consider all viable resources (DSM, renewables, power purchases, conventional generation, etc.) on a comparable basis.
- ◆ IRP fosters a long term view of planning rather than a short term view.
- Regulatory Purview:
 - ◆ IRP examines the reliability of the electric system.
 - ◆ IRP helps to ensure the sustainability of the electric system. Sustainability relates to the ability of the electric system to provide electric services over the long run.
 - ◆ IRP contributes to improvement of analytical techniques such as decision making under uncertainty. This improvement results in a better selection of electricity resources.
 - ◆ IRP incorporates transmission planning.
 - ◆ Some regulators favor regional planning as a means to provide electricity more efficiently and at lower prices. The Federal Energy Regulatory Commission (FERC), for instance, favors regional transmission planning. IRP at the state level could contribute to more effective regional planning.
- Public Involvement Goals:
 - ◆ IRP allows stakeholders, regulators, and utility staff to seek solutions to complex problems in an open, public forum.
 - ◆ IRP allows increased accessibility of the public into the utility planning and decision-making process.
 - ◆ IRP data have value. There is a desire for IRP-related information by other interested parties.
- Environmental Goals:
 - ◆ IRP considers adverse environmental impacts of energy supply as a cost.

- Utility Goals:

- ◆ Utilities may use IRP to argue against future disallowances of the costs of those facilities that were reviewed in the IRP process.
- ◆ IRP allows parties to jointly plan up front and lessens the chances of utilities receiving blame after the fact.

WHAT ISSUES RELATED TO IRP ARE IMPORTANT?

One major concern is what would be foregone if IRP is abandoned in a competitive environment. Planning could lose its long term focus. High transaction cost resources (such as DSM, renewables) might be avoided. Various planning techniques and strategies could be discontinued and replaced with a short-run, quarterly profit focus. Other issues are:

- Service at Long-Run, Least Societal Cost:

- ◆ The costs of long range planning are large and those costs may make utilities less competitive in a restructured industry; however utility competitors are likely to engage in long term planning, albeit as a private, not public activity.
- ◆ Customers have expectations for lower prices as a result of competition. Are customers really only interested in short run costs? Or do they want prices to be low in the long run?

- Social Issues:

- ◆ Resolution of customer issues: equity, fairness, special needs, market barriers.
- ◆ Consideration of needs of customers with few options.

- Environmental Issues:

- ◆ How much will the environment be considered if IRP is revised or abandoned?

- Reliability & Sustainability Issues:

- ◆ Will reliability be a matter of private contract only? How will system reliability be maintained and who will be responsible for maintaining system reliability?

- Public Input into Planning:

- ◆ Public involvement in planning will change if retail wheeling occurs. Depending upon the type of restructuring adopted, public involvement may be more; it may be less; or it may change significantly in nature.
- ◆ Opportunities for public involvement:
 - ▶ Some believe that opportunities will increase. These opportunities could include utility/provider-sponsored focus groups, surveys, or public meetings. In addition, a competitive market may be customer-driven, so providers could develop methods to gauge the needs/desires of the customers.
 - ▶ Others believe there will be no opportunities for public involvement.
- ◆ Nature of public involvement:
 - ▶ Some contend that the responsiveness of competitive markets will replace public involvement in integrated resource planning, rate hearings, etc.
 - ▶ Others contend that those without market power will lose the current public involvement advantages that exist within IRP proceedings.
 - ▶ Some contend that the market will overlook environmental externalities, eschew long term investments, and exclude some resources (such as DSM) because of high transaction costs.
- ◆ Availability of information. Some information in a competitive market will become "propriety" and will no longer be available to the public.

- Implementation Issues for Future Planning:

- ◆ Planning criteria may change in a restructured industry:
 - ▶ Tests. Currently, Arizona utilities use the total resource cost test or the societal test² to determine which resources to add to their system.

² The societal cost test adds to the total resource costs the cost of environmental externalities.

Some suggest that utilities will not be able to compete in a restructured industry if they continue to use the societal test, because societal goals such as energy efficiency can diverge from utility goals.

- ▶ Competing objectives. Some contend that new objectives such as "survival," pricing competitiveness, etc. will outweigh traditional objectives of reliability, safety, least societal cost, etc.
- ◆ Time scale for planning may change. (i.e. planning horizons could collapse to a few years or even a few months.)
- ◆ In a restructured, competitive industry utilities will need the ability to move quickly to meet the needs of changing markets. Formal IRP requirements may not allow the flexibility needed by utilities to compete in the new industry.
- ◆ Planning could start from a focus on customer needs. Some contend that current planning starts from estimates of aggregate demand, moves to large, central station plant selection, and finally addresses the transmission and distribution system that is needed to get the electricity from the large plants down to the individual customers. Planning in a restructured industry may start from the needs and demands of the individual, disaggregated customer and then might proceed in the opposite direction. This will force the electricity provider to learn exactly what customers want and exactly what it costs to serve them.
- ◆ Changes in rules. (Who regulates?) (Federal? State? Consumer level?)
- ◆ Confidentiality of data. Who can gain access to utility databases?
- ◆ Some organizations are required to do IRP, some, such as municipalities or independent power producers, are not. If only some are required to engage in IRP, are they at a disadvantage? If IRP was transformed into strategic planning, would organizations engaged in strategic planning be at a disadvantage?
- ◆ Will renewables, energy efficiency, etc. be fully considered in a revised planning process?
- ◆ Will the demands of large customers dominate planning and decisions?

ENVIRONMENTAL ISSUES

One of the major concerns related to the possibility of electric industry restructuring is that environmental impacts may increase as utilities and other electricity providers strive to be low-cost providers of kilowatt-hours.

UNSOLVED PROBLEMS WITH CURRENT REGULATORY REGIME

- How do we handle externalities?³ This issue has been widely debated. Some recommend that a quantitative (monetized) value of externalities be added to resource costs prior to resource selection. Others say that externalities and other important factors should be judged through a multi-attribute analysis approach. The concern is that, without considering externality costs, the planners' choice of new resources will not fully reflect the total societal costs of the resource that is chosen.
- Full costs of environmental impacts are not reflected in the price of electricity. Therefore, electricity customers will not see the "true cost" of their purchase.

AUTHORITY TO REGULATE

- Who establishes environmental norms? How are damages measured?

RESPONSIBILITIES FOR ENVIRONMENTAL COSTS

- Stewardship. This concept holds that each of us is responsible for the impacts that we impose on our environment. If our production or use of electricity imposes damages or costs on others (or on society at large), we should be responsible in paying for the costs/damages or take the requisite steps to reduce or eliminate the damages or costs.
- Is it the responsibility of the utilities (and their shareholders) to pay for environmental damages/costs or should the costs be passed on to the ultimate electricity customer, whose use of electricity creates the environmental damage?

³ An externality is defined as an impact on society not accounted for by the producers or consumers of electricity in the course of production or consumption of electricity. An externality can be negative, for example, when there is pollution created during the production of electricity.

IMPLEMENTATION

- Do utilities and other participants just meet minimum compliance requirements? Or go beyond? Who decides whether to go beyond minimum compliance? Who has the authority to enforce environmental requirements?
- Conservation of fuels. By conserving fuels, we indirectly reduce impacts on the environment in two ways. First, we reduce the environmental impacts related to mining, drilling, transporting, processing the fuels, and disposing of waste such as ash or scrubber materials. Second, as we burn less of the fuels, we reduce direct environmental pollution impacts. In a more competitive, restructured industry, the pressure to provide the short run, least cost electricity may force utilities and other electricity providers to abandon efforts to conserve fuel.
- Is the 100 MW threshold for Power Plant & Line Siting Committee too high?
- Jurisdictional equity: all players should meet the same requirements. There is a concern, for instance, that electricity providers from outside Arizona may not be held to the same standards as Arizona utilities.
- How do we encourage renewables, DSM? Some suggest that the answer is to make them more efficient and lower their price. How does this happen? Is this done by private industry? What is the role of utilities, other power producers/suppliers? What is the role of regulators?
- One method to handle environmental concerns is to adopt the federal emission caps/allowance trading approach. This approach is market driven. Prices of allowances are determined by supply and demand. This environmental approach would be consistent with a more-competitive, restructured industry. If implemented in a wide-spread manner, pollution would be reduced by the most cost-effective mechanisms.
- Is it appropriate to monetize environmental costs and benefits?
- It is difficult to compare renewable/DSM resources to conventional resources in terms of environmental costs/benefits. The environmental benefits derived from the use of many renewable and DSM resources are seldom calculated or counted in the resource evaluation. Similarly, the negative environmental impacts of using conventional fossil fuel and nuclear resources are seldom calculated. This failure to completely consider all benefits and costs can lead to an erroneous conclusion that some renewables and DSM resources are more costly than conventional (fossil, nuclear) resources, when in fact such may not be the case. If a complete cost calculation is made, considering both positive environmental benefits as well as negative environmental impacts, a more equitable comparison of resources can be made.
- Are the impacts on future generations less important than current impacts?
- There is the potential that future changes in environmental laws or regulations will significantly increase the costs and reduce the cost-effectiveness of certain

generating resources. The costs of the risks may be borne by independent powers producers (IPPs), by utility shareholders, and by customers. A green portfolio⁴ may provide a hedge against those risks.

- Air quality is difficult to value. The value of air quality will vary widely between non-attainment areas and attainment areas. Rather than calculating generic or system-wide air quality values, planners could calculate site-specific air quality values related to specific resource sites.

POTENTIAL PROBLEMS RESULTING FROM RESTRUCTURING

- Will restructuring cause a need for new transmission with its resulting environmental impacts?
- Environmental issues may cause customer fuel switching. Depending upon which fuel is selected, there may be a worsening of environmental impacts.

OPPORTUNITIES RESULTING FROM RESTRUCTURING

- Environment as a business opportunity rather than regulatory requirements.

CONCLUSIONS

After reviewing the IRP-related and environment-related issues identified in the brainstorming exercise, it became apparent that the issues fit into five major categories:

- SERVICE AT LONG-RUN, LEAST SOCIETAL COST
- SOCIAL ISSUES
- ENVIRONMENTAL PROTECTION
- RELIABILITY & SUSTAINABILITY OF ELECTRIC SERVICES
- PUBLIC INPUT INTO PLANNING

The manifestations of these issues are likely to vary, depending on whether one is assessing competitive provision of electric energy services or noncompetitive provision of these services. The competitive sector may encompass all sales and purchases or may encompass only some of the market, such as sales to larger consumers. Further, the form of these issues will depend on business strategies in the competitive sector. Some suppliers will be short run cost avoiders and some could be long run investors who establish a long run business strategy. Table 1 summarizes the five issues.

⁴ A green portfolio would be a mix of environmentally benign resources or resources that have the least possible environmental impacts. These resources could include renewables, DSM, and other clean resources such as fuel cells.

TABLE 1. SUMMARY OF ENERGY EFFICIENCY AND ENVIRONMENTAL ISSUES

Evaluation Criteria	Competitive Sector		Noncompetitive Sector (if any)
	Suppliers Are Short Run Cost Avoiders	Suppliers Are Long Run Investors	
Long Run Cost Minimization	<ul style="list-style-type: none"> ♦ Little incentive to invest in lowering transaction costs of DSM, but falling energy prices may offset this ♦ Will not invest in renewables ♦ Risk management between consumer and producer may shift 	<ul style="list-style-type: none"> ♦ Some incentive to invest in lowering transaction costs of DSM as customer service ♦ May invest in renewables to lower costs and as hedge against fuel price increases ♦ Risk management between consumer and producer may shift 	<ul style="list-style-type: none"> ♦ Regulators devise means to lower transaction costs of DSM ♦ Regulators may require investments in renewables.
Social Issues	<ul style="list-style-type: none"> ♦ Diminished public involvement ♦ Discontinuation of social programs ♦ Quality of service in rural/poor areas may diminish or prices may increase 		<ul style="list-style-type: none"> ♦ Public involvement may be retained ♦ Social programs may be retained
Environmental Protection	<ul style="list-style-type: none"> ♦ Little concern over environmental issues ♦ No public input 	<ul style="list-style-type: none"> ♦ Environmental issues may be incorporated in supplier's strategic plans ♦ Green products may be marketed 	<ul style="list-style-type: none"> ♦ Environmental quality addressed in planning process ♦ Environmental issues may be incorporated in supplier's strategic plans ♦ Green products may be encouraged
Reliability & Sustainability of Electric Services	<ul style="list-style-type: none"> ♦ Customers choose desired level of reliability and pay accordingly ♦ Industry standards ♦ Coordination may be more complex 		<ul style="list-style-type: none"> ♦ May allow consumers to choose desired level of reliability
Public Input into Planning	<ul style="list-style-type: none"> ♦ Public input restricted to market demand 	<ul style="list-style-type: none"> ♦ Public input includes market demand and may include more formal involvement 	<ul style="list-style-type: none"> ♦ Public input via participation in regulatory activities

APPENDIX: PERSONS ATTENDING TASK FORCE MEETING, MAY 19, 1995

Organization	Name
Arizona Corporation Commission	Kim Clark, David Berry, Ray Williamson
Intel	Phil Sarikas
Navopache Electric Cooperative	Dennis Hughes, Paul O'Dair
Fort Huachuca	Bill Stein
Arizona House of Representatives	Teri Grier
City of Phoenix	Bill Murphy
Arizona Community Action Association	Betty Pruitt
Arizona Corporation Commission	Ron Franquero, Prem Bahl
Karsten Manufacturing Corporation	Mike Oliver
Resource Management International, Inc.	Alan Propper
Barrington Consulting	Michael Roach
Arizona Public Service	Bill Maese
Arizona Public Service	Joe Branom
Tucson Electric Power	J. Corby Gardiner
Arizona Electric Power Cooperative	Ted Adamczyk
Citizens Utility Company	Michael Newton
Land and Water Fund of the Rockies	Rick Gilliam
Tucson Electric Power	Rick Mack
Arizona Community Action Association	Jeff Schlegel (consultant to ACAA)
Salt River Project	Steve Hulet
Residential Utility Consumer Office	Dale Leavesley
Southwest Gas Corporation	Wally Kolberg
Arizona Energy Office	Maureen Bureson
Honeywell	Jeff Sutherland
IBEW	Danny McKinney
Arizona Public Service	Ajit Bhatti, Barbara Klemstine
Trico Electric Cooperative	Larry Schone
Sulphur Springs Valley Electric Coop.	Mac Trahan
Arizona State Senate	Debbie Johnston, Tami Ryall